Pioneer *sound.vision.soul*

Service Manual

GM-6200F/XU/UC

ORDER NO.
CRT3520

BRIDGEABLE FOUR-CHANNEL POWER AMPLIFIER

GM-6200F/XU/UC
GM-6200F/XU/EW
GM-6200F/XU/ES
GM-6200F/XU/CN

For details, refer to "Important Check Points for Good Servicing".

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936
ⓒ**PIONEER CORPORATION 2005**

K-ZZA. OCT. 2005 Printed in Japan

SAFETY INFORMATION

CAUTION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer.
Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.
Health & Safety Code Section 25249.6 - Proposition 65

● **Service Precaution**

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety

Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification(addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments

To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts

Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning

For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws

To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

CONTENTS

SAFETY INFORMATION 2
1. SPECIFICATIONS 5
2. EXPLODED VIEWS AND PARTS LIST 8
2.1 PACKING 8
2.2 EXTERIOR 10
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM 12
3.1 SCHEMATIC DIAGRAM(GUIDE PAGE) 12
4. PCB CONNECTION DIAGRAM 18
4.1 AMP UNIT 18
5. ELECTRICAL PARTS LIST 22
6. ADJUSTMENT 27
7. GENERAL INFORMATION 28
7.1 DIAGNOSIS 28
7.1.1 DISASSEMBLY 28
7.1.2 CONNECTOR FUNCTION DESCRIPTION 29
8. OPERATIONS 30

1. SPECIFICATIONS

Power source	14.4 V DC (10.8 — 15.1 V allowable)
Grounding system	Negative type
Current consumption	35.0 A (at continuous power, 4 Ω)
Backup current	3 mA or less
Average current drawn*	9.0 A (4 Ω for four channels)
	15.0 A (4 Ω for two channels)
Fuse	25 A × 2
Dimensions	300 (W) × 61 (H) × 336 (D) mm
	[12 in. (W) × 2-3/8 in. (H) × 1 ft. 1 in. (D)]
Weight	3.9 kg (8.6 lbs.) (Leads for wiring not included)
Maximum power output	120 W × 4 (4 Ω) / 300 W × 2 (4 Ω)
Continuous power output	60 W × 4 (at 14.4 V, 4 Ω, 20 Hz — 20 kHz 0.2% THD)
	150 W × 2 (at 14.4 V, 4 Ω, 20 Hz — 20 kHz 0.8% THD)
	75 W × 4 (at 14.4 V, 2 Ω, 20 Hz — 20 kHz 0.8% THD)
Load impedance	4 Ω (2 — 8 Ω allowable)
	(Bridge connection: 4 — 8 Ω allowable)
Frequency response	10 Hz — 50 kHz (+0 dB, –1 dB)
Signal-to-noise ratio	95 dB (IHF-A network)
Distortion	0.01 % (10 W, 1 kHz)
Separation	70 dB (1 kHz)
Low pass filter	Cut off frequency: 80 Hz
	Cut off slope: –12 dB/oct
High pass filter	Cut off frequency: 80 Hz
	Cut off slope: –12 dB/oct
Gain control	RCA: 400 mV — 6.5 V
	Speaker: 1.6 — 26 V
Maximum input level / impedance	RCA: 6.5 V / 22 kΩ
	Speaker: 26 V / 40 kΩ

Power output	60 W RMS × 4 channels
	(4 Ω and ≦1 % THD+N)
	150 W RMS × 2 channels
	(4 Ω and ≦1 % THD+N)
	75 W RMS × 4 channels
	(2 Ω and ≦1 % THD+N)
Signal-to-noise ratio	80 dBA (Reference: 1 W into 4 Ω)

Note:

- Specifications and the design are subject to possible modification without notice due to improvements.

***Average current drawn**

- The average current drawn is nearly the maximum current drawn by this unit when an audio signal is input. Use this value when working out total current drawn by multiple power amplifiers.

● GM-6200F/XU/EW , GM-6200F/XU/ES

Power source	14.4 V DC (10.8 — 15.1 V allowable)
Grounding system	Negative type
Current consumption	35.0 A (at continuous power, 4 Ω)
Backup current	3 mA or less
Average current drawn*	9.0 A (4 Ω for four channels)
	15.0 A (4 Ω for two channels)
Fuse	25 A × 2
Dimensions	300 (W) × 61 (H) × 336 (D) mm
Weight	3.9 kg (Leads for wiring not included)
Maximum power output	120 W × 4 (4 Ω) / 300 W × 2 (4 Ω)
Continuous power output	60 W × 4 (at 14.4 V, 4 Ω, 20 Hz— 20 kHz, 0.2% THD)
	150 W × 2 (at 14.4 V, 4 Ω, 20 Hz— 20 kHz, 0.8% THD)
	75 W × 4 (at 14.4 V, 2 Ω, 20 Hz— 20 kHz, 0.8% THD)
Continuous power output (DIN power)	80 W × 4 (4 Ω) / 230 W × 2 (4 Ω) (DIN45324, +B=14.4 V)
Load impedance	4 Ω (2 — 8 Ω allowable)
	(Bridge connection: 4 — 8 Ω allowable)
Frequency response	10 Hz— 50 kHz (+0 dB, –1 dB)
Signal-to-noise ratio	95 dB (IEC-A network)
Distortion	0.01% (10 W, 1 kHz)
Separation	70 dB (1 kHz)
Low pass filter	Cut off frequency: 80 Hz
	Cut off slope: –12 dB/oct
High pass filter	Cut off frequency: 80 Hz
	Cut off slope: –12 dB/oct
Gain control	RCA: 400 mV — 6.5 V
	Speaker: 1.6 — 26 V
Maximum input level / impedance	RCA: 6.5 V / 22 kΩ
	Speaker: 26 V / 40 kΩ

Note:

- Specifications and the design are subject to possible modification without notice due to improvements.

***Average current drawn**

- The average current drawn is nearly the maximum current drawn by this unit when an audio signal is input. Use this value when working out total current drawn by multiple power amplifiers.

● GM-6200F/XU/CN

电源	14.4V DC（容许范围10.8－15.1V）
接地系统	负极型
电流消耗	35.0A（连续供电时，4Ω）
Backup current	3 mA or less
平均消费电流*	9.0A（4声道为4Ω）
	15.0A（2声道为4Ω）
保险丝	25A × 2
尺寸	300（宽）× 61（高）× 336（深）mm
重量	3.9kg（不含导线）
最大输出功率	120W × 4（4Ω）/300W × 2（4Ω）
各声道连续输出功率	60W × 4（14.4V时，4Ω，20Hz－20kHz，0.2% THD）
	150W × 2（14.4V时，4Ω，20Hz－20kHz，0.8% THD）
	75W × 4（14.4V时，2Ω，20Hz－20kHz，0.8% THD）
负载阻抗	4Ω（容许范围2－8Ω）
	（桥接：容许范围4－8Ω）
频率响应	10Hz－50kHz（+0dB，-1dB）
信噪比	95dB（IEC-A网络）
失真	0.01%（10W，1kHz）
分离度	70dB（1kHz）
低通滤波器	截止频率：80Hz
	截止斜率：-12dB/oct
高通滤波器	截止频率：80Hz
	截止斜率：-12dB/oct
输入灵敏度	RCA：400mV－6.5V
	扬声器：1.6－26V
最大输入音压／阻抗	RCA：6.5V/22kΩ
	扬声器：26V/40kΩ

注：

- 因产品改进，规格和设计若有变更，恕不另行通知。

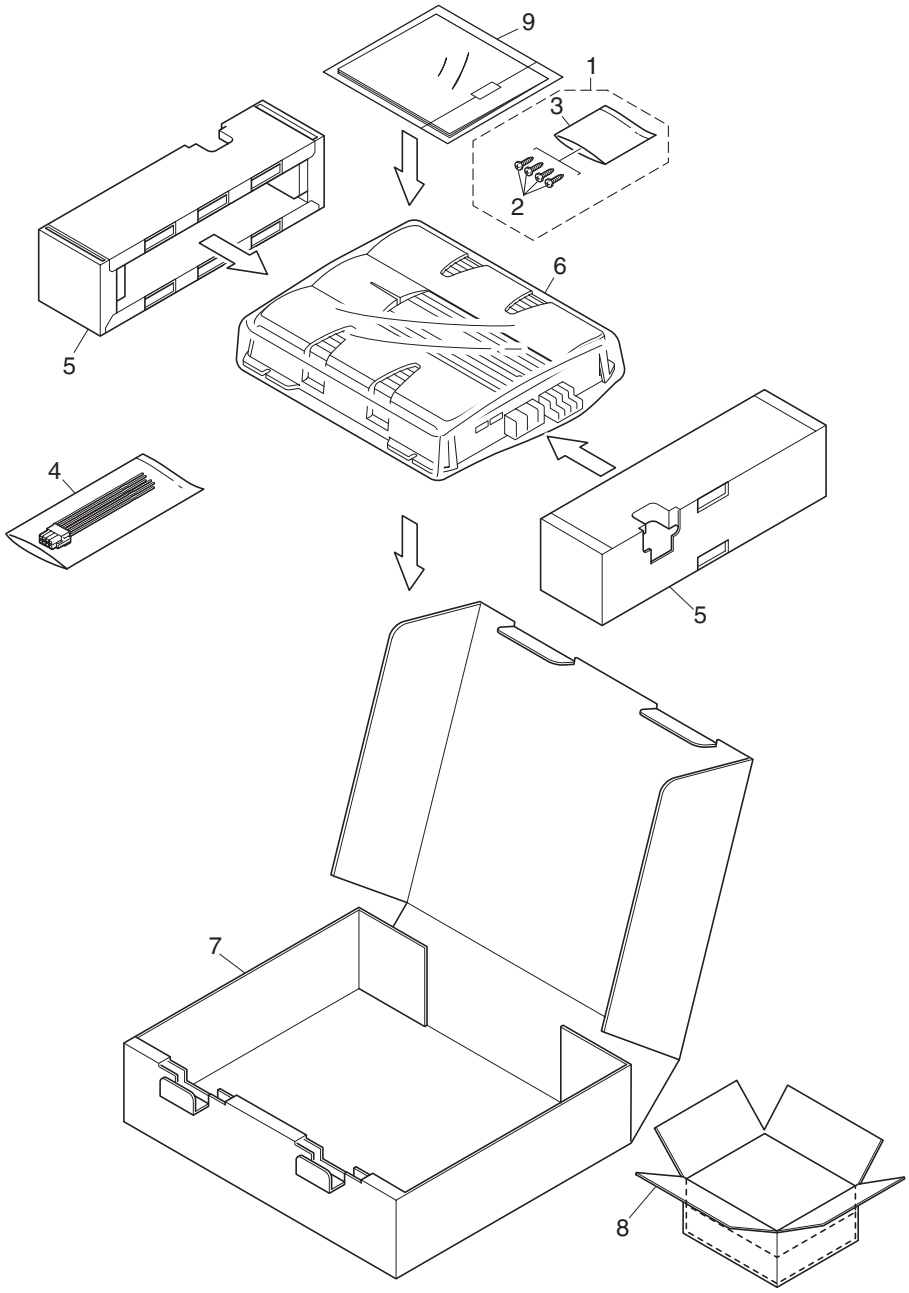
***平均消费电流**

- 本机的平均消费电流在输入音频信号时几乎等于最大牵引电流。计算多台功率放大器的总牵引电流时请使用该值。

2. EXPLODED VIEWS AND PARTS LIST

*NOTES : • Parts marked by " * " are generally unavailable because they are not in our Master Spare Parts List.*
• The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
• Screw adjacent to▽mark on the product are used for disassembly.
• For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions,apply as you think it appropriate.)

2.1 PACKING



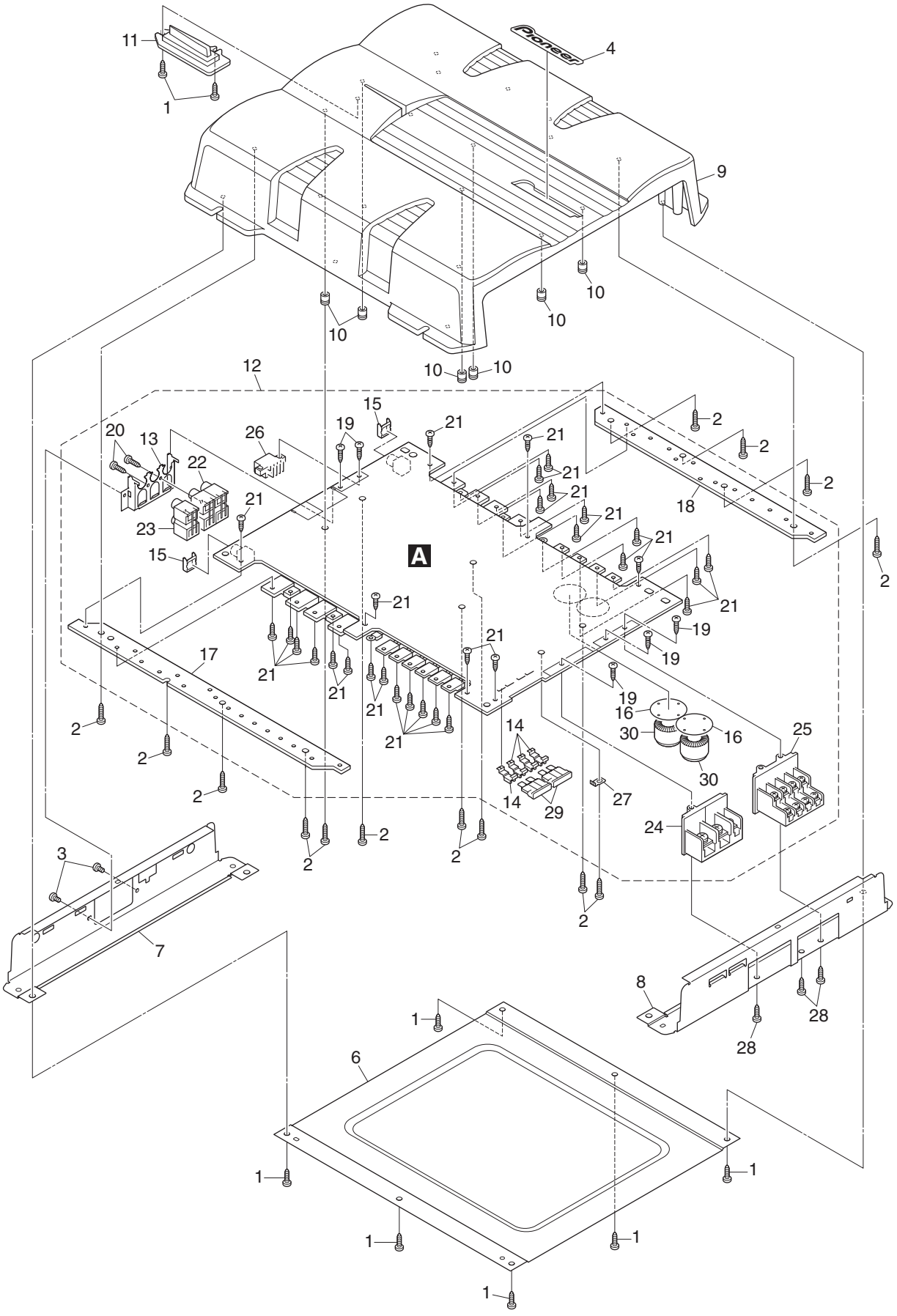
PACKING SECTION PARTS LIST

Mark	No.	Description	GM-6200F/XU/UC	GM-6200F/XU/EW	GM-6200F/XU/ES	GM-6200F/XU/CN
	1	Screw Assy	CEA5330	CEA5330	CEA5330	CEA5330
	2	Screw	BYC40P180FTB	BYC40P180FTB	BYC40P180FTB	BYC40P180FTB
*	3	Polyethylene Sheet	CNM4338	CNM4338	CNM4338	CNM4338
	4	Cord Assy	CDE7737	CDE7737	CDE7737	CDE7737
	5	Protector	CHP3066	CHP3066	CHP3066	CHP3066
	6	Polyethylene Bag	CEG1351	CEG1317	CEG1317	CEG1317
	7	Carton	CHG5592	CHG5591	CHG5593	CHG5594
	8	Contain Box	CHL5592	CHL5591	CHL5593	CHL5594
	9-1	Polyethylene Bag	CEG1116	CEG1116	CEG1116	CEG1116
	9-2	Owner's Manual	CRD4020	CRD4019	CRD4021	CRB2108
*	9-3	Warranty Card	Not used	CRY1157	Not used	ARY7046
*	9-4	Card	ARY1048	Not used	Not used	Not used
	9-5	Owner's Manual	Not used	Not used	CRD4022	Not used

Owner's Manual

Part No.	Language
CRD4020	English, French, Spanish
CRD4019	English, Spanish, German, French, Italian, Dutch, Russian
CRD4021	English, Spanish
CRD4022	Arabic, Portuguese(B)
CRB2108	Traditional Chinese

2.2 EXTERIOR


A
B
C
D
E
F
Pioneer
1
2
3
4
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30

(1) EXTERIOR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw(M3x8)	CBA2011
	2	Screw(M3x12)	CBA2012
	3	Screw	BSZ30P050FTB
*	4	Badge	CAH1946
	5	•••••	
	6	Case	CNB3199
	7	Panel	CNB3204
	8	Panel	CNB3208
	9	Heat Sink	See Contrast table(2)
	10	Spacer	CNV8256
	11	Lighting Conductor	CNV8692
	12	Amp Unit	CWH1289
	13	Holder	CND2457
	14	Terminal	CND2458
	15	Holder	CND2466
	16	Insulator	CNM9285
	17	Sub Heat Sink	CNR1809
	18	Sub Heat Sink	CNR1811
	19	Screw	PPZ30P100FSN
	20	Screw	PPZ30P100FTB
	21	Screw(M3x8)	CBA2011
	22	Pin Jack (CN851)	CKB1066
	23	Pin Jack (CN852)	CKB1068
	24	Terminal (CN601)	CKE1055
	25	Terminal (CN301)	CKE1059
	26	Connector (CN853)	CKM1334
	27	Terminal (CN604)	VNF1084
	28	Screw	PPZ30P100FTB
⚠	29	Fuse (FU101, FU102) (25A)	CEK1329
	30	Choke Coil (L902, L903)	CTH1326

(2) CONTRAST TABLE

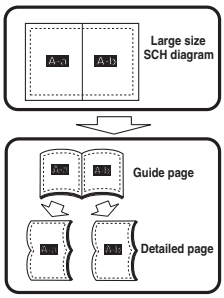
GM-6200F/XU/UC, GM-6200F/XU/EW, GM-6200F/XU/ES and GM-6200F/XU/CN are constructed the same except for the following:

Mark	No.	Description	GM-6200F/XU/UC	GM-6200F/XU/EW	GM-6200F/XU/ES	GM-6200F/XU/CN
	9	Heat Sink	CNR1833	CNR1832	CNR1833	CNR1833

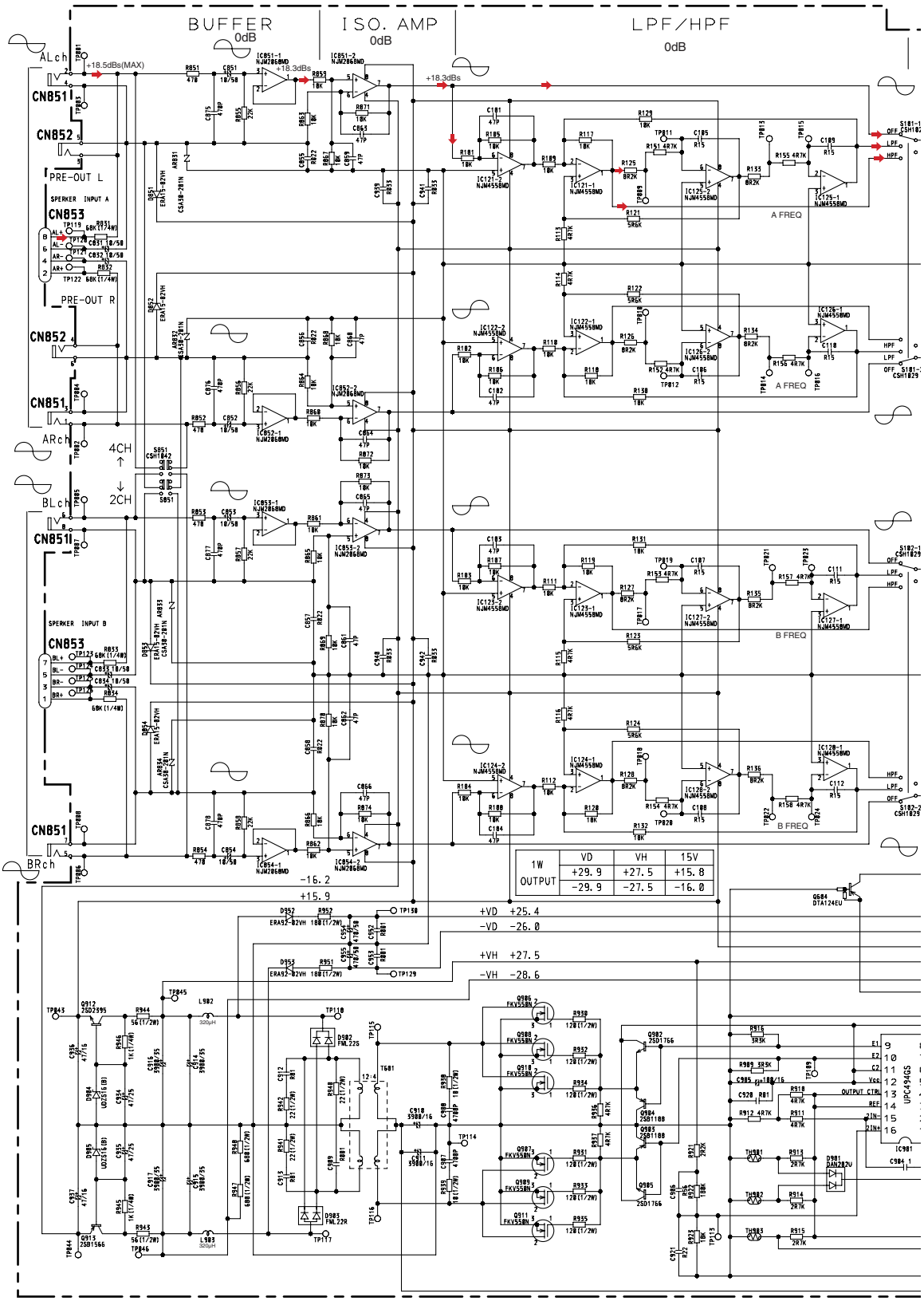
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 SCHEMATIC DIAGRAM(GUIDE PAGE)

Note: When ordering service parts, be sure to refer to " EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".



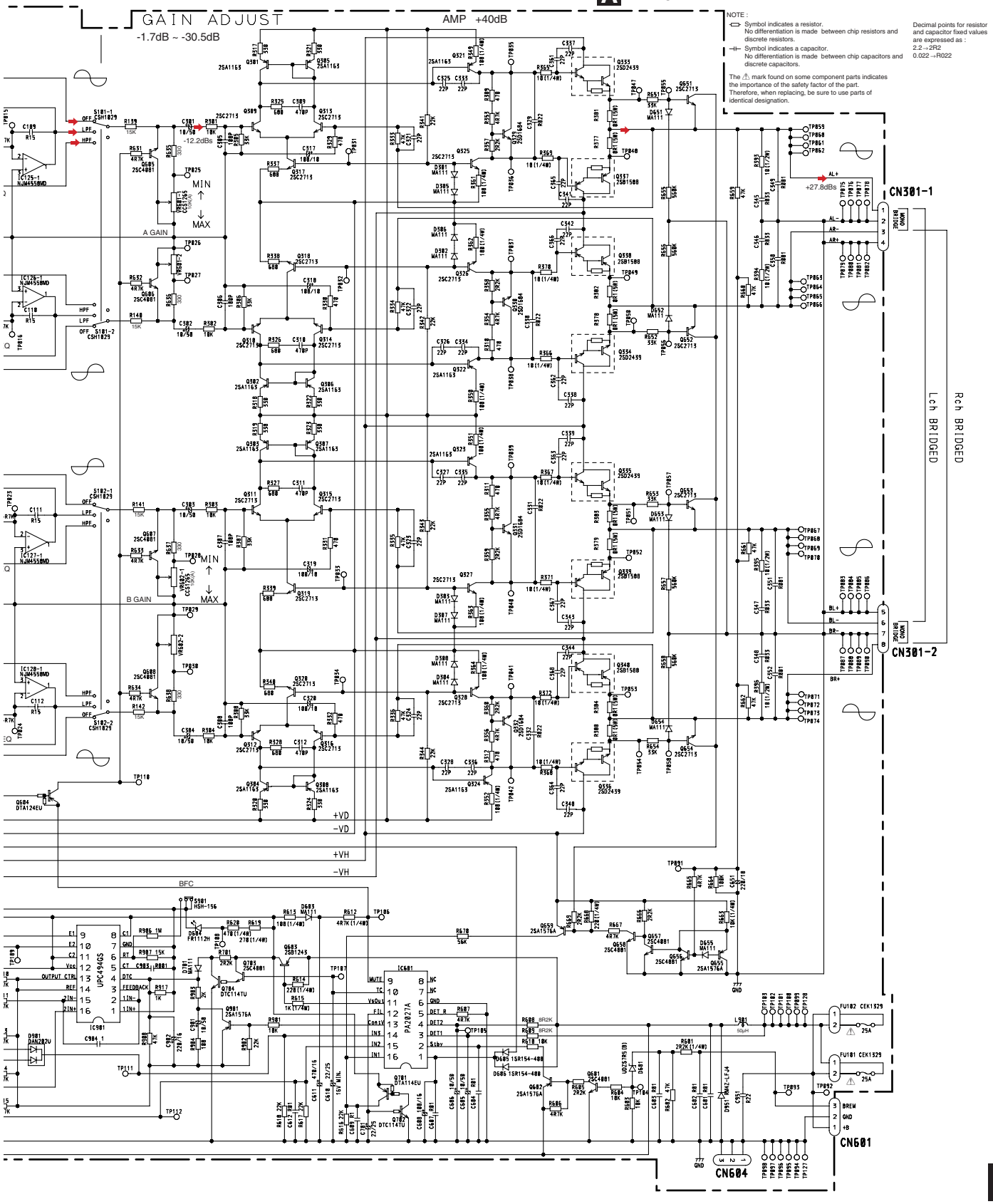
A-a

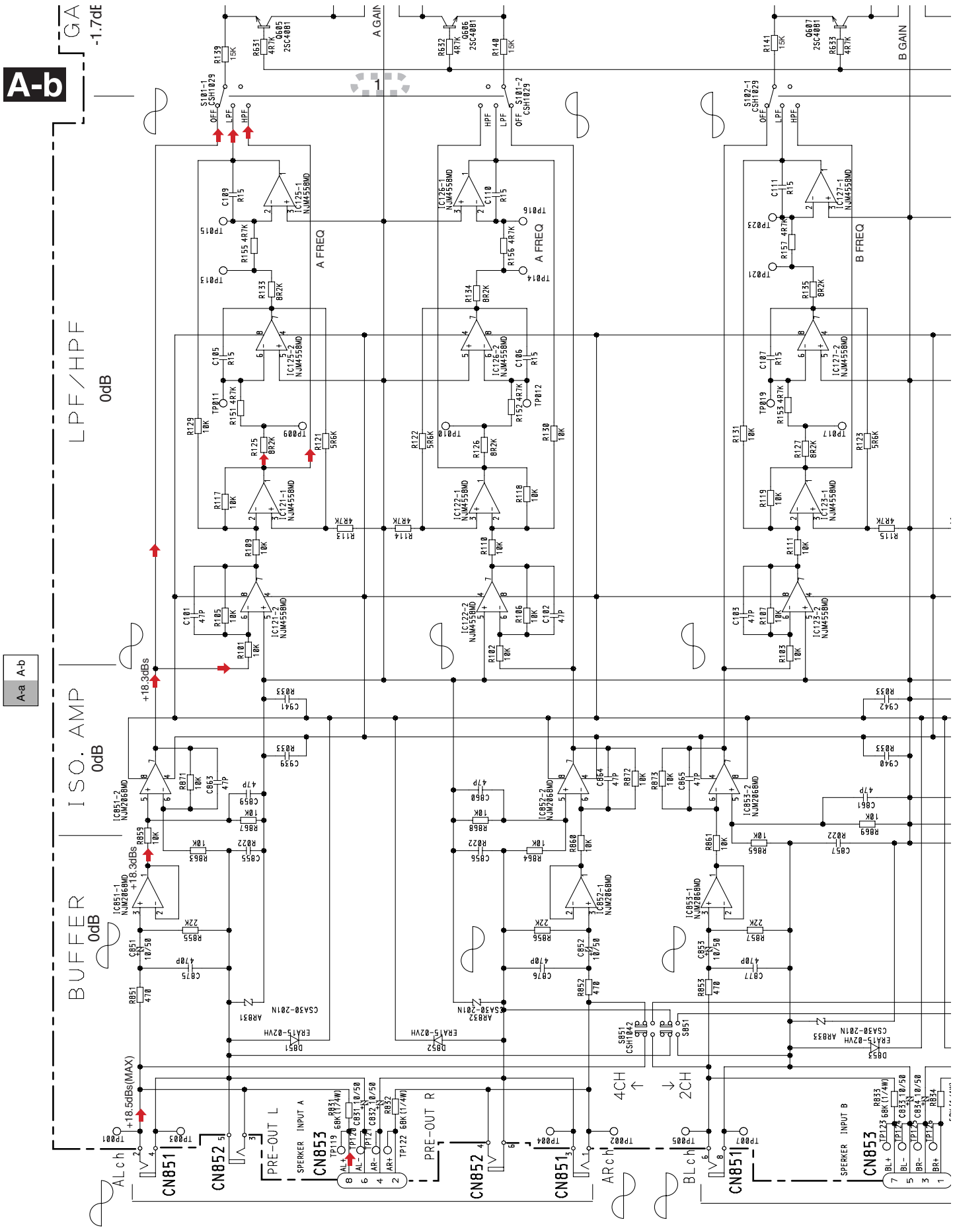


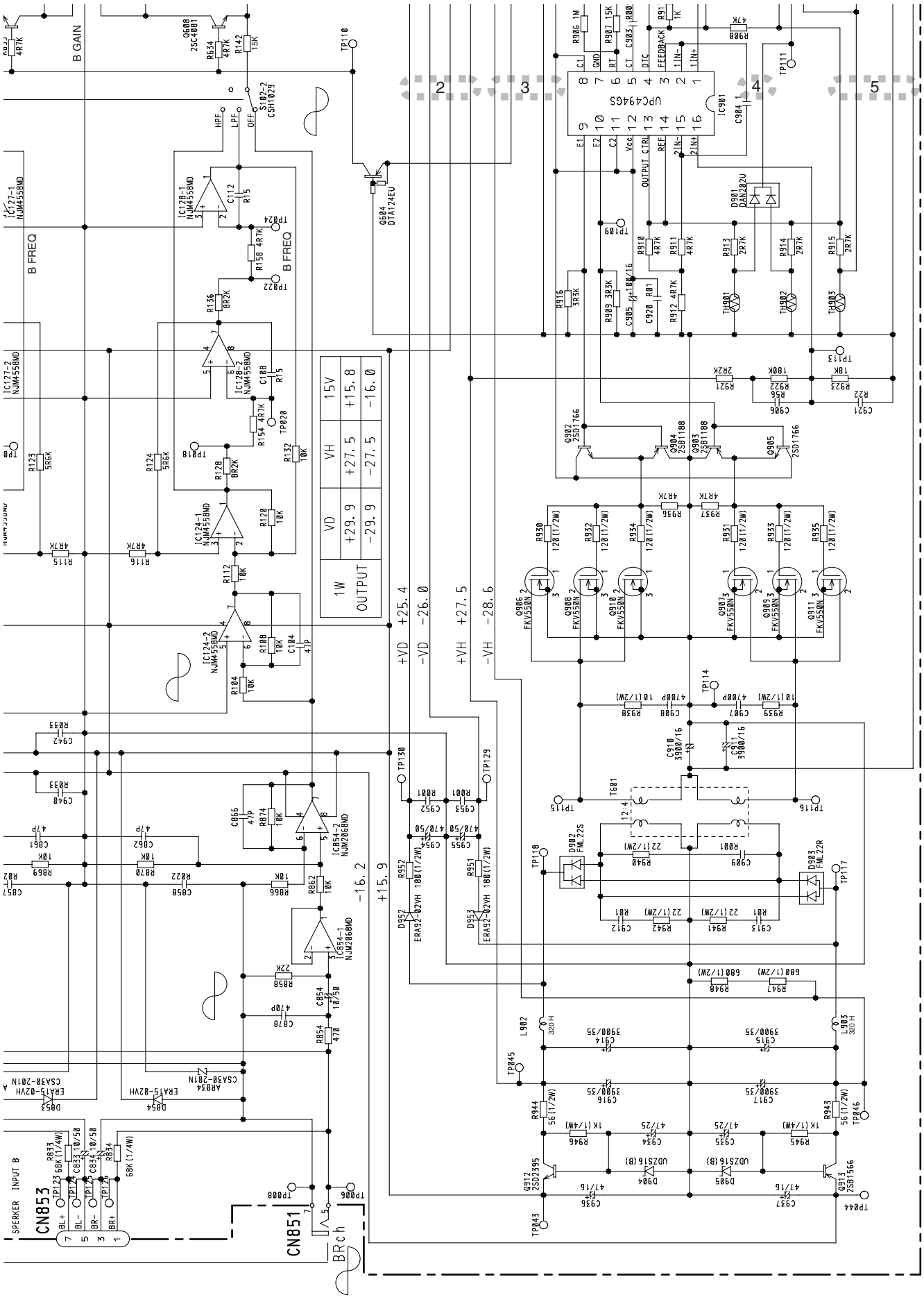
A

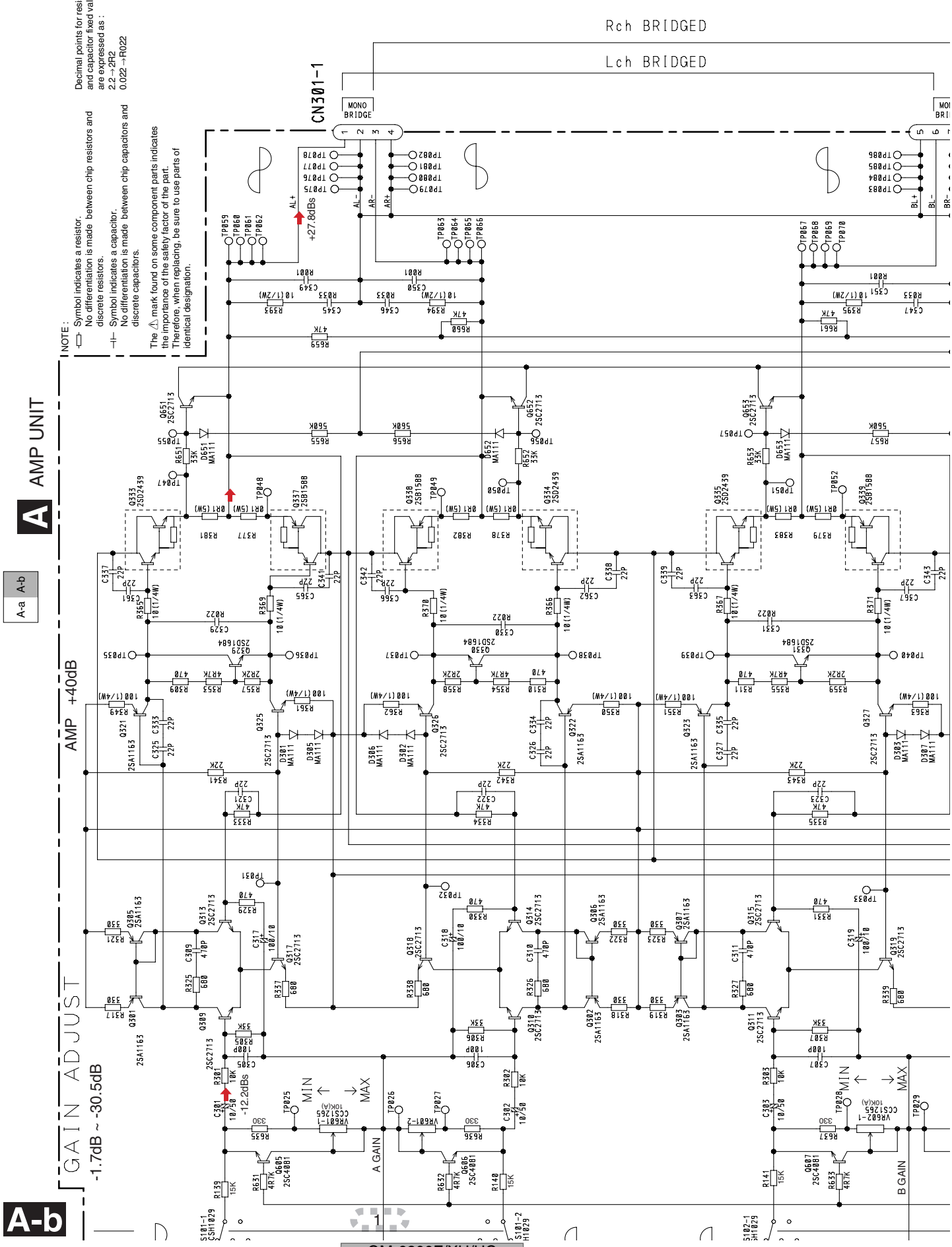
A-b

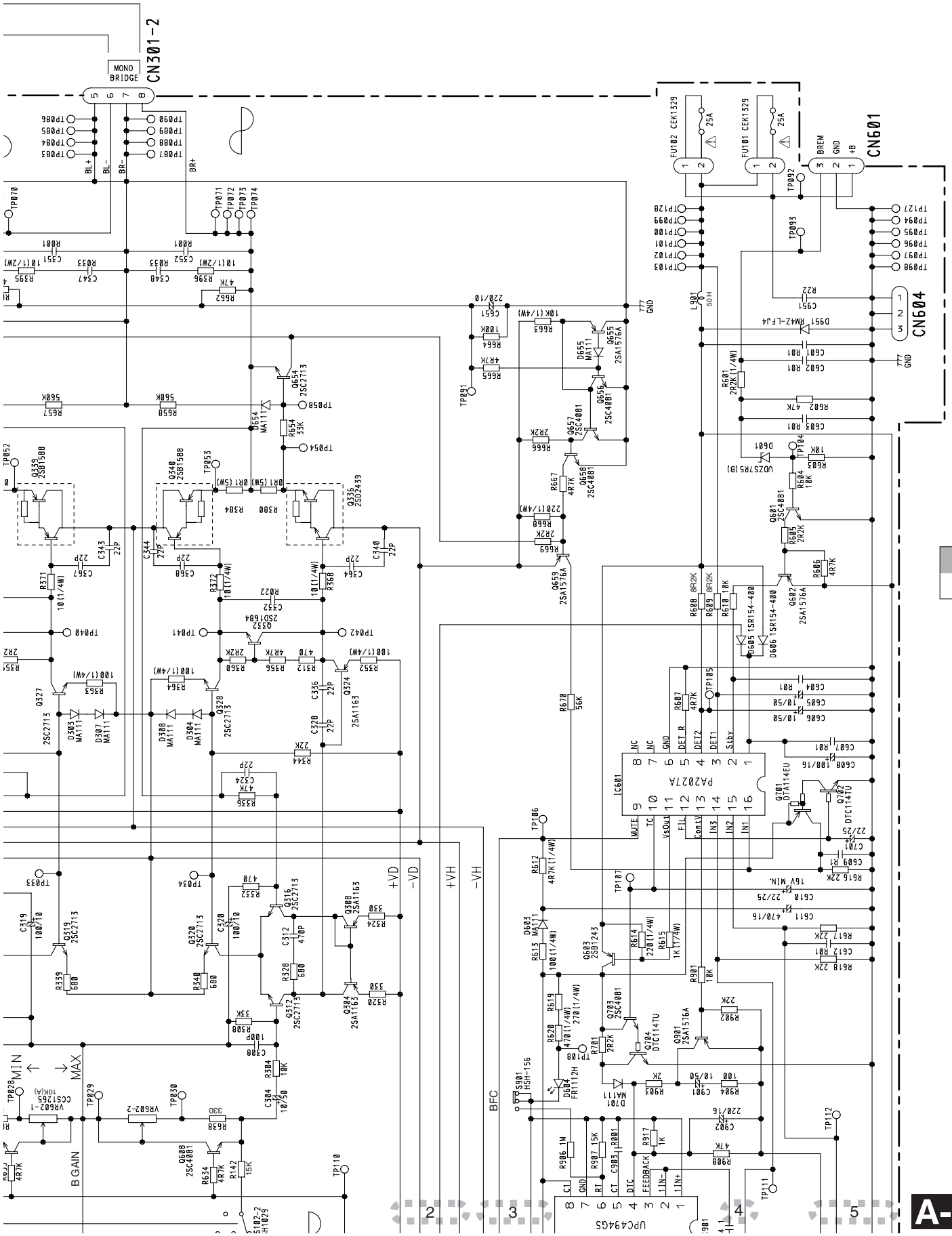
A AMP UNIT


GAIN ADJUST
-1.7dB ~ -30.5dB
AMP +40dB
NOTE :
Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
Decimal points for resistor and capacitor fixed values are expressed as :
2.2→2R2
0.022→R022
-12.2dBs
+27.8dBs
MIN
MAX
A GAIN
B GAIN
BFC
+VD
-VD
+VH
-VH
CN301-1
CN301-2
Rch BRIDGED
Lch BRIDGED
CN601
CN604


A-b
A-a
LPF/HPF
0dB
ISO. AMP
0dB
BUFFER
0dB
A GAIN
B GAIN
A FREQ
B FREQ
-1.7dB
+18.3dBs
+18.5dBs(MAX)
ALch
ARch
BLch
4CH
2CH
PRE-OUT L
PRE-OUT R
SPEAKER INPUT A
SPEAKER INPUT B
CN851
CN852
CN853


A-b
A-a
B GAIN
B FREQ
B FREQ
SPEAKER INPUT B
CN853
CN851
BRch
UPC4945S
OUTPUT CTRL
FEEDBACK
+VD +25.4
-VD -26.0
+VH +27.5
-VH -28.6
-16.2
+15.9
VD +29.9 -29.9
VH +27.5 -27.5
15V +15.8 -16.0
1W OUTPUT

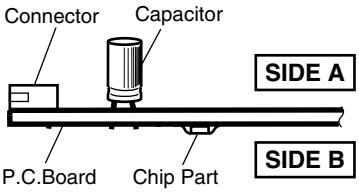

Rch BRIDGED
Lch BRIDGED
CN301-1
MONO BRIDGE
AMP UNIT
A
A-a
A-b
AMP +40dB
GAIN ADJUST
-1.7dB ~ -30.5dB
-12.2dBs
+27.8dBs
A GAIN
B GAIN
MIN
MAX
NOTE :
Symbol indicates a resistor.
No differentiation is made between chip resistors and discrete resistors.
Symbol indicates a capacitor.
No differentiation is made between chip capacitors and discrete capacitors.
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part.
Therefore, when replacing, be sure to use parts of identical designation.
Decimal points for resistor and capacitor fixed values are expressed as :
2.2→2R2
0.022→R022


CN301-2
MONO BRIDGE
CN601
CN604
FU102 CEK1329
FU101 CEK1329
25A
BREM
GND
+B
BL+
BL-
BR-
BR+
IC601
PA2027A
UPC4945G
MUTE
TC
VsOut
FIL
ConV
IN3
IN2
IN1
NC
GND
DET_R
DET2
DET1
Stby
+VD
-VD
+VH
-VH
BFC
B GAIN
MIN
MAX
FEEDBACK
DTC
RT
CT
C1
1IN-
1IN+
A-b
A-a
GM-6200F/XU/UC
17

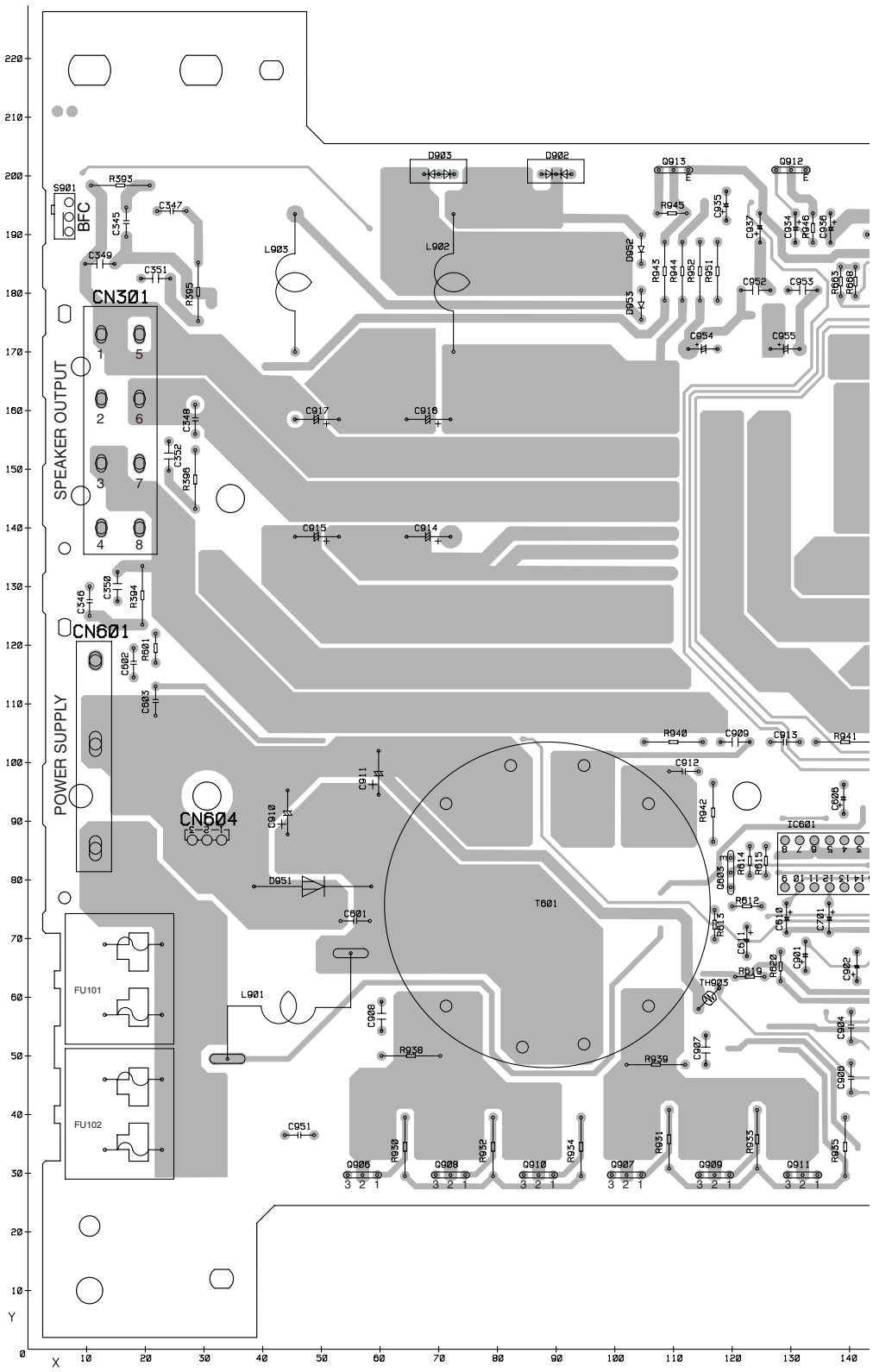
4. PCB CONNECTION DIAGRAM
4.1 AMP UNIT

NOTE FOR PCB DIAGRAMS

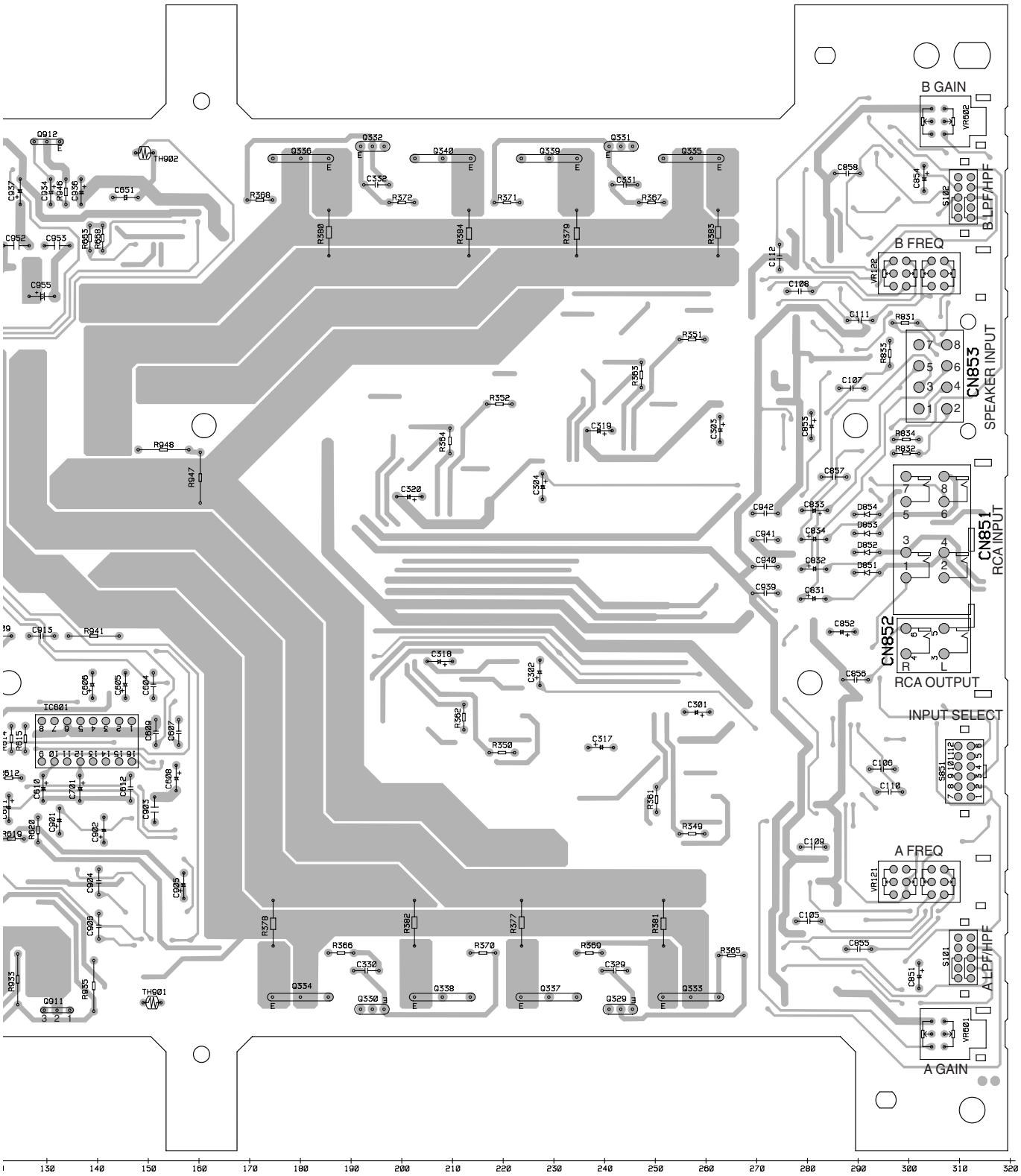
1. The parts mounted on this PCB include all necessary parts for several destination. For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams



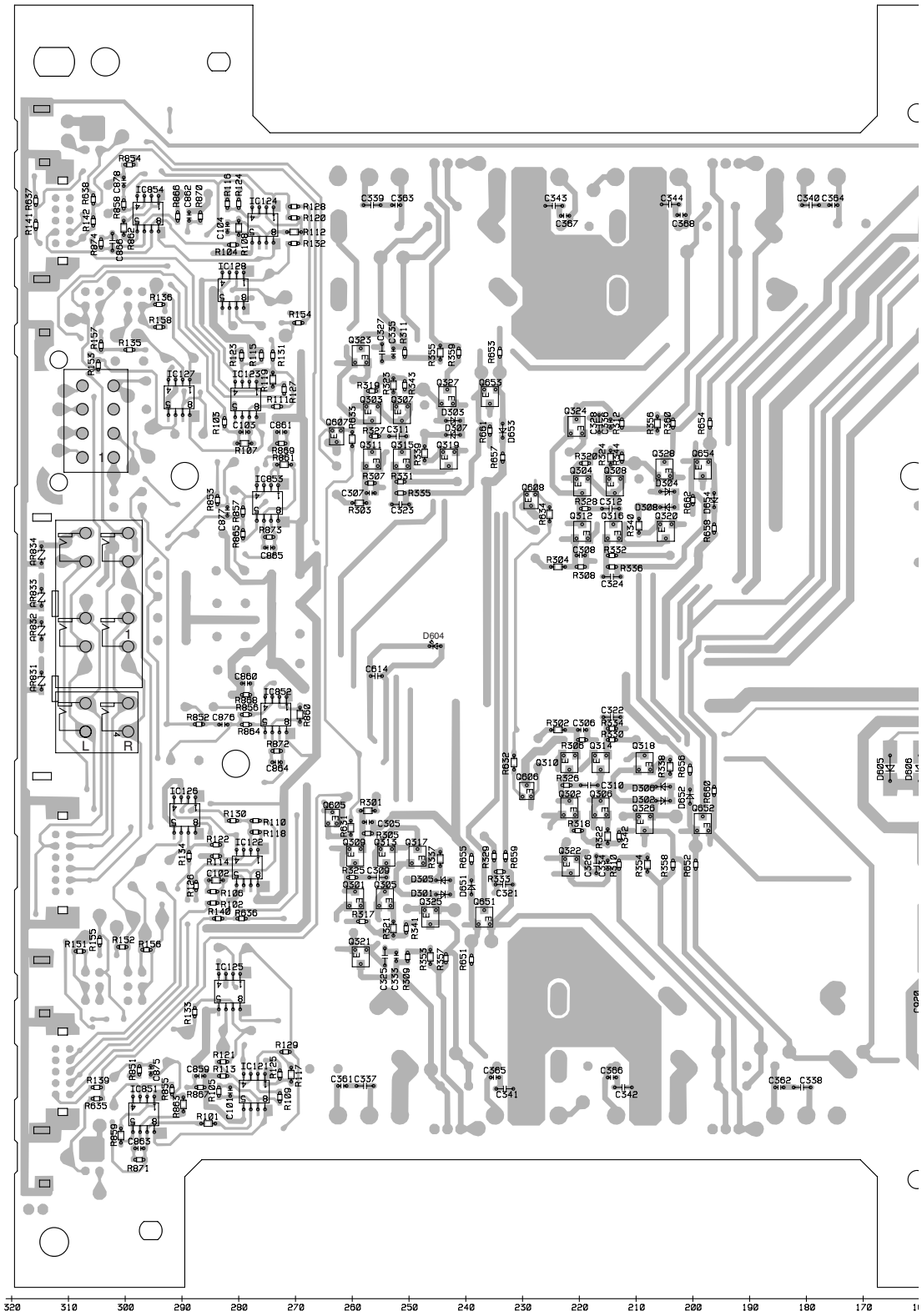
A AMP UNIT



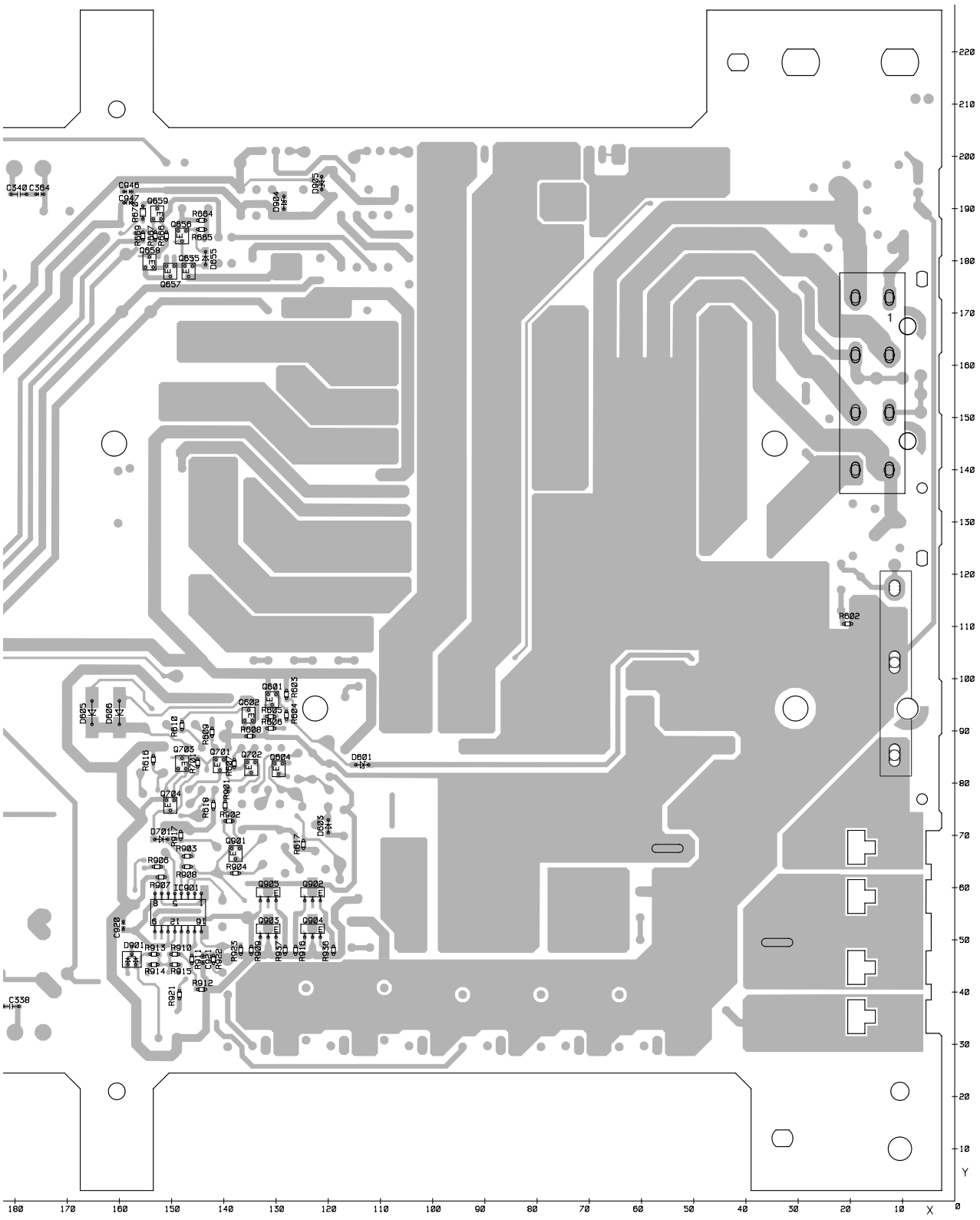
SIDE A


B GAIN
VR602
B LPF/HPF
S102
B FREQ
VR122
CN853
SPEAKER INPUT
CN851
RCA INPUT
CN852
RCA OUTPUT
INPUT SELECT
S851
A FREQ
VR121
A LPF/HPF
S101
A GAIN
VR601
IC601
TH902
TH901
Q912
Q911
Q332
Q331
Q340
Q339
Q336
Q335
Q334
Q333
Q330
Q329
Q338
Q337
R368
R372
R371
R367
R380
R384
R379
R383
R351
R352
R385
R384
R948
R947
R941
R935
R936
R378
R382
R377
R381
R366
R370
R369
R365
R362
R350
R361
R349
C651
C952
C953
C955
C858
C854
C112
C108
C111
C107
C853
C857
C942
C941
C940
C939
C833
C834
C832
C831
C852
C856
C318
C320
C319
C303
C304
C302
C301
C317
C330
C329
C915
C606
C605
C604
C609
C607
C610
C701
C612
C608
C903
C901
C902
C904
C905
C906
C106
C110
C109
C105
C855
C851
R831
R833
R834
R832
D854
D853
D852
D851
R615
R614
R612
R619
R620
R911
R912
R913
R914
R915
R916
R917
R918
R919
R920
R921
R922
R923
R924
R925
R926
R927
R928
R929
R930
R931
R932
R933
R934
R935
R936
R937
R938
R939
R940
R941
R942
R943
R944
R945
R946
R947
R948
R949
R950
R951
R952
R953
R954
R955
R956
R957
R958
R959
R960
R961
R962
R963
R964
R965
R966
R967
R968
R969
R970
R971
R972
R973
R974
R975
R976
R977
R978
R979
R980
R981
R982
R983
R984
R985
R986
R987
R988
R989
R990
R991
R992
R993
R994
R995
R996
R997
R998
R999
R1000

A AMP UNIT



SIDE B


C340 C364
C946
C947
Q659
Q656
Q658
Q655
Q657
R664
R665
D904
D905
D655
R602
D605
D606
Q601
Q602
R603
R604
R605
R606
R608
R610
R609
Q703
Q701
Q702
Q704
R616
R618
R902
R901
D701
R617
D603
D601
Q901
R903
R904
R906
R908
R907
IC901
Q905
Q902
Q903
Q904
C920
D901
R913
R910
R914
R915
R912
R921
C338
X
Y

5. ELECTRICAL PARTS LIST

NOTE:

- *Parts whose parts numbers are omitted are subject to being not supplied.*
- *The part numbers shown below indicate chip components.*

  Chip Resistor

  RS1/◯S◯◯◯J,RS1/◯◯S◯◯◯J

  Chip Capacitor (except for CQS.....)

  CKS....., CCS....., CSZS.....
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Meaning of the figures and others in the parentheses in the parts list.*

  Example) IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding PC board.

  IC 301 (A, 91, 111) IC NJM2068V

A

Unit Number : CWH1289

Unit Name : Amp Unit

MISCELLANEOUS

Circuit Symbol and No.		Part No.
IC 121	(B,277,37) IC	NJM4558MD
IC 122	(B,279,76) IC	NJM4558MD
IC 123	(B,279,159) IC	NJM4558MD
IC 124	(B,276,189) IC	NJM4558MD
IC 125	(B,282,54) IC	NJM4558MD
IC 126	(B,290,85) IC	NJM4558MD
IC 127	(B,291,159) IC	NJM4558MD
IC 128	(B,281,178) IC	NJM4558MD
IC 601	(A,147,87) IC	PA2027A
IC 851	(B,297,33) IC	NJM2068MD
IC 852	(B,273,103) IC	NJM2068MD
IC 853	(B,275,140) IC	NJM2068MD
IC 854	(B,296,191) IC	NJM2068MD
IC 901	(B,149,55) IC	UPC494GS
Q 301	(B,260,71) Transistor	2SA1163
Q 302	(B,222,87) Transistor	2SA1163
Q 303	(B,257,156) Transistor	2SA1163
Q 304	(B,220,143) Transistor	2SA1163
Q 305	(B,254,71) Transistor	2SA1163
Q 306	(B,216,87) Transistor	2SA1163
Q 307	(B,251,156) Transistor	2SA1163
Q 308	(B,214,143) Transistor	2SA1163
Q 309	(B,260,78) Transistor	2SC2713
Q 310	(B,222,95) Transistor	2SC2713
Q 311	(B,257,148) Transistor	2SC2713
Q 312	(B,220,135) Transistor	2SC2713
Q 313	(B,254,78) Transistor	2SC2713
Q 314	(B,216,95) Transistor	2SC2713
Q 315	(B,251,148) Transistor	2SC2713
Q 316	(B,214,135) Transistor	2SC2713
Q 317	(B,249,78) Transistor	2SC2713
Q 318	(B,209,95) Transistor	2SC2713
Q 319	(B,243,148) Transistor	2SC2713
Q 320	(B,205,135) Transistor	2SC2713
Q 321	(B,259,60) Transistor	2SA1163
Q 322	(B,222,76) Transistor	2SA1163
Q 323	(B,259,166) Transistor	2SA1163
Q 324	(B,221,154) Transistor	2SA1163
Q 325	(B,246,67) Transistor	2SC2713
Q 326	(B,209,84) Transistor	2SC2713
Q 327	(B,243,159) Transistor	2SC2713
Q 328	(B,205,146) Transistor	2SC2713
Q 329	(A,246,30) Transistor	2SD1684
Q 330	(A,197,30) Transistor	2SD1684
Q 331	(A,241,200) Transistor	2SD1684
Q 332	(A,192,200) Transistor	2SD1684
Q 333	(A,263,32) Transistor	2SD2439
Q 334	(A,186,32) Transistor	2SD2439
Q 335	(A,252,198) Transistor	2SD2439
Q 336	(A,175,198) Transistor	2SD2439
Q 337	(A,235,32) Transistor	2SB1588
Q 338	(A,214,32) Transistor	2SB1588
Q 339	(A,224,198) Transistor	2SB1588
Q 340	(A,203,198) Transistor	2SB1588
Q 601	(B,131,96) Transistor	2SC4081
Q 602	(B,135,93) Transistor	2SA1576A
Q 603	(A,120,84) Transistor	2SB1243
Q 604	(B,130,83) Transistor	DTA124EU
Q 605	(B,264,85) Transistor	2SC4081
Q 606	(B,229,90) Transistor	2SC4081
Q 607	(B,263,152) Transistor	2SC4081
Q 608	(B,229,141) Transistor	2SC4081
Q 651	(B,237,67) Transistor	2SC2713
Q 652	(B,198,84) Transistor	2SC2713
Q 653	(B,236,159) Transistor	2SC2713
Q 654	(B,198,146) Transistor	2SC2713
Q 655	(B,147,178) Transistor	2SA1576A
Q 656	(B,148,185) Transistor	2SC4081
Q 657	(B,150,178) Transistor	2SC4081
Q 658	(B,154,180) Transistor	2SC4081
Q 659	(B,153,189) Transistor	2SA1576A
Q 701	(B,141,84) Transistor	DTA114EU
Q 702	(B,135,83) Transistor	DTC114TU
Q 703	(B,148,84) Transistor	2SC4081

Circuit Symbol and No.		Part No.
Q 704	(B,150,76) Transistor	DTC114TU
Q 901	(B,138,67) Transistor	2SA1576A
Q 902	(B,123,59) Transistor	2SD1766
Q 903	(B,132,52) Transistor	2SB1188
Q 904	(B,123,52) Transistor	2SB1188
Q 905	(B,132,59) Transistor	2SD1766
Q 906	(A,60,30) Transistor	FKV550N
Q 907	(A,105,30) Transistor	FKV550N
Q 908	(A,75,30) Transistor	FKV550N
Q 909	(A,120,30) Transistor	FKV550N
Q 910	(A,90,30) Transistor	FKV550N
Q 911	(A,135,30) Transistor	FKV550N
Q 912	(A,128,201) Transistor	2SD2395
Q 913	(A,108,201) Transistor	2SB1566
D 301	(B,244,71) Diode	MA111
D 302	(B,205,88) Diode	MA111
D 303	(B,242,155) Diode	MA111
D 304	(B,205,142) Diode	MA111
D 305	(B,244,74) Diode	MA111
D 306	(B,205,90) Diode	MA111
D 307	(B,242,152) Diode	MA111
D 308	(B,205,140) Diode	MA111
D 601	(B,114,84) Diode	UDZS7R5(B)
D 603	(B,120,72) Diode	MA111
D 604	(B,245,115) LED	FR1112H
D 605	(B,165,94) Diode	1SR154-400
D 606	(B,160,94) Diode	1SR154-400
D 651	(B,239,73) Diode	MA111
D 652	(B,201,89) Diode	MA111
D 653	(B,234,153) Diode	MA111
D 654	(B,196,141) Diode	MA111
D 655	(B,144,181) Diode	MA111
D 701	(B,152,69) Diode	MA111
D 851	(A,294,116) Diode	ERA15-02VH
D 852	(A,294,120) Diode	ERA15-02VH
D 853	(A,294,124) Diode	ERA15-02VH
D 854	(A,294,128) Diode	ERA15-02VH
D 901	(B,158,46) Diode	DAN202U
D 902	(A,88,200) Diode	FML22S
D 903	(A,68,200) Diode	FML22R
D 904	(B,129,191) Diode	UDZS16(B)
D 905	(B,121,195) Diode	UDZS16(B)
D 951	(A,39,79) Diode	RM4Z-LFJ4
D 952	(A,105,190) Diode	ERA92-02VH
D 953	(A,105,181) Diode	ERA92-02VH
L 901	(A,55,68) Choke Coil 50µH	CTH1323
L 902	(A,73,170) Choke Coil 320µH	CTH1326
L 903	(A,46,170) Choke Coil 320µH	CTH1326
T 601	(A,89,76) Transformer	CTT1125
TH901	(A,149,31) Thermistor	CCX1065
TH902	(A,151,199) Thermistor	CCX1065
TH903	(A,114,58) Thermistor	CCX1064
S 101	(A,312,36) Switch(A LPF/HPF)	CSH1029
S 102	(A,312,186) Switch(B LPF/HPF)	CSH1029
S 851	(A,312,72) Slide Switch(INPUT SELECT)	CSH1042
S 901	(A,7,196) Switch(BFC)	HSH-156
VR601	(A,307,23) 10kΩ(A)(A GAIN)	CCS1265
VR602	(A,307,203) 10kΩ(A)(B GAIN)	CCS1265
⚠FU101	(A,18,63) Fuse 25A	CEK1329
⚠FU102	(A,18,40) Fuse 25A	CEK1329

Circuit Symbol and No.		Part No.
AR831	(B,315,109) Surge Protector	CSA30-201N
AR832	(B,315,118) Surge Protector	CSA30-201N
AR833	(B,315,124) Surge Protector	CSA30-201N
AR834	(B,315,131) Surge Protector	CSA30-201N

RESISTORS

R 101	(B,285,31)	RS1/16S103J
R 102	(B,285,70)	RS1/16S103J
R 103	(B,283,155)	RS1/16S103J
R 104	(B,281,186)	RS1/16S103J
R 105	(B,284,37)	RS1/16S103J
R 106	(B,285,72)	RS1/16S103J
R 107	(B,279,151)	RS1/16S103J
R 108	(B,280,189)	RS1/16S103J
R 109	(B,273,36)	RS1/16S103J
R 110	(B,277,84)	RS1/16S103J
R 111	(B,273,157)	RS1/16S103J
R 112	(B,270,188)	RS1/16S103J
R 113	(B,283,39)	RS1/16S472J
R 114	(B,284,78)	RS1/16S472J
R 115	(B,276,166)	RS1/16S472J
R 116	(B,282,193)	RS1/16S472J
R 117	(B,271,40)	RS1/16S103J
R 118	(B,277,82)	RS1/16S103J
R 119	(B,274,162)	RS1/16S103J
R 120	(B,270,191)	RS1/16S103J
R 121	(B,283,42)	RS1/16S562J
R 122	(B,284,80)	RS1/16S562J
R 123	(B,280,166)	RS1/16S562J
R 124	(B,280,193)	RS1/16S562J
R 125	(B,273,40)	RS1/16S822J
R 126	(B,288,73)	RS1/16S822J
R 127	(B,272,160)	RS1/16S822J
R 128	(B,270,193)	RS1/16S822J
R 129	(B,272,44)	RS1/16S103J
R 130	(B,281,84)	RS1/16S103J
R 131	(B,274,166)	RS1/16S103J
R 132	(B,270,186)	RS1/16S103J
R 133	(B,288,51)	RS1/16S822J
R 134	(B,289,78)	RS1/16S822J
R 135	(B,299,167)	RS1/16S822J
R 136	(B,294,175)	RS1/16S822J
R 139	(B,305,37)	RS1/16S153J
R 140	(B,284,67)	RS1/16S153J
R 141	(B,316,189)	RS1/16S153J
R 142	(B,306,190)	RS1/16S153J
R 151	(B,308,61)	RS1/16S472J
R 152	(B,301,62)	RS1/16S472J
R 153	(B,305,165)	RS1/16S472J
R 154	(B,270,172)	RS1/16S472J
R 155	(B,305,63)	RS1/16S472J
R 156	(B,296,62)	RS1/16S472J
R 157	(B,304,168)	RS1/16S472J
R 158	(B,294,171)	RS1/16S472J
R 301	(B,257,86)	RS1/16S103J
R 302	(B,224,100)	RS1/16S103J
R 303	(B,259,140)	RS1/16S103J
R 304	(B,224,129)	RS1/16S103J
R 305	(B,257,82)	RS1/16S333J

Circuit Symbol and No.		Part No.	Circuit Symbol and No.		Part No.
R 306	(B,220,99)	RS1/16S333J	R 378	(A,175,51) 0.1Ω	CCN1155
R 307	(B,257,144)	RS1/16S333J	R 379	(A,235,188) 0.1Ω	CCN1155
R 308	(B,220,129)	RS1/16S333J	R 380	(A,186,179) 0.1Ω	CCN1155
R 309	(B,250,60)	RS1/16S471J	R 381	(A,252,51) 0.1Ω	CCN1155
R 310	(B,213,77)	RS1/16S471J	R 382	(A,203,42) 0.1Ω	CCN1155
R 311	(B,251,167)	RS1/16S471J	R 383	(A,262,179) 0.1Ω	CCN1155
R 312	(B,213,154)	RS1/16S471J	R 384	(A,213,188) 0.1Ω	CCN1155
R 317	(B,258,67)	RS1/16S331J	R 393	(A,21,198)	RD1/2PM100J
R 318	(B,220,83)	RS1/16S331J	R 394	(A,20,134)	RD1/2PM100J
R 319	(B,257,160)	RS1/16S331J	R 395	(A,29,175)	RD1/2PM100J
R 320	(B,219,147)	RS1/16S331J	R 396	(A,29,153)	RD1/2PM100J
R 321	(B,253,65)	RS1/16S331J	R 601	(A,22,117)	RD1/4PU222J
R 322	(B,215,82)	RS1/16S331J	R 602	(B,21,111)	RS1/16S473J
R 323	(B,253,161)	RS1/16S331J	R 603	(B,128,97)	RS1/16S103J
R 324	(B,215,148)	RS1/16S331J	R 604	(B,128,93)	RS1/16S103J
R 325	(B,260,74)	RS1/16S681J	R 605	(B,131,93)	RS1/16S222J
R 326	(B,222,91)	RS1/16S681J	R 606	(B,131,91)	RS1/16S472J
R 327	(B,256,152)	RS1/16S681J	R 607	(B,138,84)	RS1/16S472J
R 328	(B,219,139)	RS1/16S681J	R 608	(B,135,89)	RS1/16S822J
R 329	(B,235,78)	RS1/16S471J	R 609	(B,142,90)	RS1/16S822J
R 330	(B,214,99)	RS1/16S471J	R 610	(B,148,91)	RS1/16S103J
R 331	(B,252,144)	RS1/16S471J	R 612	(A,120,76)	RD1/4PU472J
R 332	(B,214,131)	RS1/16S471J	R 613	(A,117,75)	RD1/4PU101J
R 333	(B,234,75)	RS1/16S473J	R 614	(A,123,81)	RD1/4PU221J
R 334	(B,214,101)	RS1/16S473J	R 615	(A,126,81)	RD1/4PU102J
R 335	(B,252,142)	RS1/16S473J	R 616	(B,154,85)	RS1/16S223J
R 336	(B,214,129)	RS1/16S473J	R 617	(B,125,68)	RS1/16S223J
R 337	(B,245,78)	RS1/16S681J	R 618	(B,142,76)	RS1/16S223J
R 338	(B,204,94)	RS1/16S681J	R 619	(A,121,64)	RD1/4PU271J
R 339	(B,247,149)	RS1/16S681J	R 620	(A,128,68)	RD1/4PU471J
R 340	(B,210,136)	RS1/16S681J	R 631	(B,260,83)	RS1/16S472J
R 341	(B,251,65)	RS1/16S223J	R 632	(B,232,95)	RS1/16S472J
R 342	(B,213,82)	RS1/16S223J	R 633	(B,260,152)	RS1/16S472J
R 343	(B,251,161)	RS1/16S223J	R 634	(B,225,138)	RS1/16S472J
R 344	(B,213,148)	RS1/16S223J	R 635	(B,305,35)	RS1/16S331J
R 349	(A,260,65)	RD1/4PU101J	R 636	(B,280,67)	RS1/16S331J
R 350	(A,222,81)	RD1/4PU101J	R 637	(B,316,194)	RS1/16S331J
R 351	(A,260,162)	RD1/4PU101J	R 638	(B,306,194)	RS1/16S331J
R 352	(A,222,149)	RD1/4PU101J	R 651	(B,239,60)	RS1/16S333J
R 353	(B,246,60)	RS1/16S472J	R 652	(B,200,77)	RS1/16S333J
R 354	(B,208,77)	RS1/16S472J	R 653	(B,234,167)	RS1/16S333J
R 355	(B,245,167)	RS1/16S472J	R 654	(B,197,154)	RS1/16S333J
R 356	(B,206,154)	RS1/16S472J	R 655	(B,239,78)	RS1/16S564J
R 357	(B,244,60)	RS1/16S222J	R 656	(B,201,93)	RS1/16S564J
R 358	(B,204,77)	RS1/16S222J	R 657	(B,234,148)	RS1/16S564J
R 359	(B,241,167)	RS1/16S222J	R 658	(B,196,136)	RS1/16S564J
R 360	(B,204,154)	RS1/16S222J	R 659	(B,233,78)	RS1/16S473J
R 361	(A,250,74)	RD1/4PU101J	R 660	(B,196,90)	RS1/16S473J
R 362	(A,212,85)	RD1/4PU101J	R 661	(B,236,153)	RS1/16S473J
R 363	(A,247,158)	RD1/4PU101J	R 662	(B,200,141)	RS1/16S473J
R 364	(A,210,140)	RD1/4PU101J	R 663	(A,139,180)	RD1/4PU103J
R 365	(A,268,41)	RD1/4PU100J	R 664	(B,144,188)	RS1/16S104J
R 366	(A,191,41)	RD1/4PU100J	R 665	(B,144,186)	RS1/16S472J
R 367	(A,247,189)	RD1/4PU100J	R 666	(B,151,185)	RS1/16S222J
R 368	(A,170,190)	RD1/4PU100J	R 667	(B,153,185)	RS1/16S472J
R 369	(A,240,41)	RD1/4PU100J	R 668	(A,141,180)	RD1/4PU221J
R 370	(A,219,41)	RD1/4PU100J	R 669	(B,156,185)	RS1/16S222J
R 371	(A,218,189)	RD1/4PU100J	R 670	(B,156,189)	RS1/16S563J
R 372	(A,198,189)	RD1/4PU100J	R 701	(B,145,84)	RS1/16S222J
R 377	(A,224,42) 0.1Ω	CCN1155	R 831	(A,302,165)	RD1/4PU683J

Circuit Symbol and No.		Part No.
R 832	(A,302,140)	RD1/4PU683J
R 833	(A,296,162)	RD1/4PU683J
R 834	(A,302,142)	RD1/4PU683J
R 851	(B,298,40)	RS1/16S471J
R 852	(B,287,101)	RS1/16S471J
R 853	(B,284,141)	RS1/16S471J
R 854	(B,299,200)	RS1/16S471J
R 855	(B,292,37)	RS1/16S223J
R 856	(B,279,103)	RS1/16S223J
R 857	(B,279,139)	RS1/16S223J
R 858	(B,300,193)	RS1/16S223J
R 859	(B,301,29) 10kΩ	CCN1152
R 860	(B,269,103) 10kΩ	CCN1152
R 861	(B,272,147) 10kΩ	CCN1152
R 862	(B,300,189) 10kΩ	CCN1152
R 863	(B,290,34) 10kΩ	CCN1152
R 864	(B,279,101) 10kΩ	CCN1152
R 865	(B,279,135) 10kΩ	CCN1152
R 866	(B,291,191) 10kΩ	CCN1152
R 867	(B,287,37) 10kΩ	CCN1152
R 868	(B,279,106) 10kΩ	CCN1152
R 869	(B,273,151) 10kΩ	CCN1152
R 870	(B,287,191) 10kΩ	CCN1152
R 871	(B,298,25) 10kΩ	CCN1152
R 872	(B,273,97) 10kΩ	CCN1152
R 873	(B,275,134) 10kΩ	CCN1152
R 874	(B,304,186) 10kΩ	CCN1152
R 901	(B,140,76)	RS1/16S103J
R 902	(B,139,73)	RS1/16S223J
R 903	(B,147,66)	RS1/16S202J
R 904	(B,138,63)	RS1/16S101J
R 906	(B,153,64)	RS1/16S105J
R 907	(B,152,62)	RS1/16S153J
R 908	(B,147,64)	RS1/16S473J
R 909	(B,135,48)	RS1/16S332J
R 910	(B,149,47)	RS1/16S472J
R 911	(B,146,46)	RS1/16S472J
R 912	(B,144,41)	RS1/16S472J
R 913	(B,153,47)	RS1/16S272J
R 914	(B,153,45)	RS1/16S272J
R 915	(B,149,45)	RS1/16S272J
R 916	(B,126,48)	RS1/16S332J
R 917	(B,148,70)	RS1/16S102J
R 921	(B,149,40)	RS1/16S222J
R 922	(B,142,46)	RS1/16S184J
R 923	(B,137,48)	RS1/16S183J
R 930	(A,64,30)	RD1/2PM121J
R 931	(A,109,31)	RD1/2PM121J
R 932	(A,79,30)	RD1/2PM121J
R 933	(A,124,31)	RD1/2PM121J
R 934	(A,94,30)	RD1/2PM121J
R 935	(A,139,30)	RD1/2PM121J
R 936	(B,119,48)	RS1/16S472J
R 937	(B,128,48)	RS1/16S472J
R 938	(A,60,50)	RD1/2PM100J
R 939	(A,102,49)	RD1/2PM100J
R 940	(A,115,104)	RD1/2PM220J
R 941	(A,134,104)	RD1/2PM220J
R 942	(A,117,87)	RD1/2PM220J
R 943	(A,109,189)	RD1/2PM560J
R 944	(A,112,189)	RD1/2PM560J
R 945	(A,112,194)	RD1/4PU102J
R 946	(A,134,189)	RD1/4PU102J
R 947	(A,160,140)	RD1/2PM681J
R 948	(A,148,140)	RD1/2PM681J
R 951	(A,118,189)	RD1/2PM181J
R 952	(A,115,189)	RD1/2PM181J

CAPACITORS

C 101	(B,282,37)	CCSRCH470J50
C 102	(B,284,74)	CCSRCH470J50
C 103	(B,279,153)	CCSRCH470J50
C 104	(B,282,189)	CCSRCH470J50
C 105	(A,283,47)	CFTNA154J50
C 106	(A,297,77)	CFTNA154J50
C 107	(A,291,152)	CFTNA154J50
C 108	(A,281,172)	CFTNA154J50
C 109	(A,284,62)	CFTNA154J50
C 110	(A,299,73)	CFTNA154J50
C 111	(A,293,166)	CFTNA154J50
C 112	(A,275,176)	CFTNA154J50
C 301	(A,261,89)	CEAT100M50
C 302	(A,227,94)	CEAT100M50
C 303	(A,263,147)	CEAT100M50
C 304	(A,228,136)	CEAT100M50
C 305	(B,257,84)	CCSRCH101J50
C 306	(B,220,100)	CCSRCH101J50
C 307	(B,257,142)	CCSRCH101J50
C 308	(B,220,131)	CCSRCH101J50
C 309	(B,256,74)	CKSRYB471K50
C 310	(B,218,91)	CKSRYB471K50
C 311	(B,252,152)	CKSRYB471K50
C 312	(B,215,139)	CKSRYB471K50
C 317	(A,237,82)	CEAT101M10
C 318	(A,210,99)	CEAT101M10
C 319	(A,242,144)	CEAT101M10
C 320	(A,204,131)	CEAT101M10
C 321	(B,233,73)	CCSRCH220J50
C 322	(B,214,103)	CCSRCH220J50
C 323	(B,252,140)	CCSRCH220J50
C 324	(B,214,127)	CCSRCH220J50
C 325	(B,254,60)	CCSRCH220J50
C 326	(B,217,77)	CCSRCH220J50
C 327	(B,255,167)	CCSRCH220J50
C 328	(B,217,154)	CCSRCH220J50
C 329	(A,240,38)	CFTNA223J50
C 330	(A,191,38)	CFTNA223J50
C 331	(A,247,193)	CFTNA223J50
C 332	(A,193,193)	CFTNA223J50
C 333	(B,252,60)	CCSRCH220J50
C 334	(B,215,77)	CCSRCH220J50
C 335	(B,253,167)	CCSRCH220J50
C 336	(B,215,154)	CCSRCH220J50
C 337	(B,258,38)	CCSRCH220J50
C 338	(B,181,37)	CCSRCH220J50
C 339	(B,257,193)	CCSRCH220J50
C 340	(B,179,193)	CCSRCH220J50
C 341	(B,233,37)	CCSRCH220J50
C 342	(B,212,37)	CCSRCH220J50

Circuit Symbol and No.		Part No.
C 343	(B,225,193)	CCSRCH220J50
C 344	(B,204,193)	CCSRCH220J50
C 345	(A,17,190)	CFTNA333J50
C 346	(A,11,125)	CFTNA333J50
C 347	(A,27,194)	CFTNA333J50
C 348	(A,29,161)	CFTNA333J50
C 349	(A,12,185)	CQHA102J2A
C 350	(A,15,130)	CQHA102J2A
C 351	(A,22,183)	CQHA102J2A
C 352	(A,24,152)	CQHA102J2A
C 361	(B,262,38)	CCSRCH220J50
C 362	(B,185,37)	CCSRCH220J50
C 363	(B,252,193)	CCSRCH220J50
C 364	(B,175,193)	CCSRCH220J50
C 365	(B,235,39)	CCSRCH220J50
C 366	(B,214,39)	CCSRCH220J50
C 367	(B,223,191)	CCSRCH220J50
C 368	(B,202,191)	CCSRCH220J50
C 601	(A,53,73)	CFTNA103J50
C 602	(A,18,115)	CFTNA103J50
C 603	(A,22,108)	CFTNA103J50
C 604	(A,151,96)	CFTNA103J50
C 605	(A,146,91)	CEAT100M50
C 606	(A,139,91)	CEAT100M50
C 607	(A,156,87)	CFTNA103J50
C 608	(A,156,78)	CEAT101M16
C 609	(A,152,87)	CFTNA104J50
C 610	(A,129,76)	CEAT220M25
C 611	(A,123,72)	CEAT471M16
C 612	(A,147,71)	CFTNA103J50
C 651	(A,148,190)	CEANP221M10
C 701	(A,137,76)	CEAT220M25
C 831	(A,279,111)	CEAT100M50
C 832	(A,279,117)	CEAT100M50
C 833	(A,284,128)	CEAT100M50
C 834	(A,279,123)	CEAT100M50
C 851	(A,302,39)	CEAT100M50
C 852	(A,289,104)	CEAT100M50
C 853	(A,281,148)	CEAT100M50
C 854	(A,303,196)	CEAT100M50
C 855	(A,288,42)	CFTNA223J50
C 856	(A,287,95)	CFTNA223J50
C 857	(A,283,135)	CFTNA223J50
C 858	(A,285,195)	CFTNA223J50
C 859	(B,287,39)	CCSRCH470J50
C 860	(B,279,108)	CCSRCH470J50
C 861	(B,273,153)	CCSRCH470J50
C 862	(B,289,191)	CCSRCH470J50
C 863	(B,298,27)	CCSRCH470J50
C 864	(B,273,95)	CCSRCH470J50
C 865	(B,275,132)	CCSRCH470J50
C 866	(B,302,186)	CCSRCH470J50
C 875	(B,296,40)	CKSRYB471K50
C 876	(B,283,101)	CKSRYB471K50
C 877	(B,282,139)	CKSRYB471K50
C 878	(B,300,197)	CKSRYB471K50
C 901	(A,133,65)	CEAT100M50
C 902	(A,141,63)	CEAT221M16
C 903	(A,151,69)	CQHA102J2A
C 904	(A,140,58)	CFTNA105J50

Circuit Symbol and No.		Part No.
C 905	(A,157,52)	CEAT101M16
C 906	(A,140,49)	CFTNA564J50
C 907	(A,116,51)	CQHA472J2A
C 908	(A,60,57)	CQHA472J2A
C 909	(A,121,104)	CQHA102J2A
C 910	(A,44,88) 3900µF/16V	CCH1644(P35)
C 911	(A,60,95) 3900µF/16V	CCH1644(P35)
C 912	(A,114,99)	CFTNA103J50
C 913	(A,127,104)	CFTNA103J50
C 914	(A,72,139) 3900µF/35V	CCH1645(P35)
C 915	(A,53,139) 3900µF/35V	CCH1645(P35)
C 916	(A,72,159) 3900µF/35V	CCH1645(P35)
C 917	(A,53,159) 3900µF/35V	CCH1645(P35)
C 920	(B,159,53)	CKSRYB103K50
C 921	(B,144,46)	CKSRYB224K16
C 934	(A,131,194)	CEAT470M25
C 935	(A,119,192)	CEAT470M25
C 936	(A,137,194)	CEAT470M16
C 937	(A,125,189)	CEAT470M16
C 939	(A,269,112)	CFTNA333J50
C 940	(A,274,117)	CFTNA333J50
C 941	(A,269,122)	CFTNA333J50
C 942	(A,274,128)	CFTNA333J50
C 951	(A,49,37)	CFTNA224J50
C 952	(A,124,181)	CQHA102J2A
C 953	(A,132,181)	CQHA102J2A
C 954	(A,113,171)	CEAT471M50(P45)
C 955	(A,127,171)	CEAT471M50(P45)

6. ADJUSTMENT

There is no information to be shown in this chapter.

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 DISASSEMBLY

● **Removing the Case (Fig.1)**

1 Remove the six screws and then remove the Case.

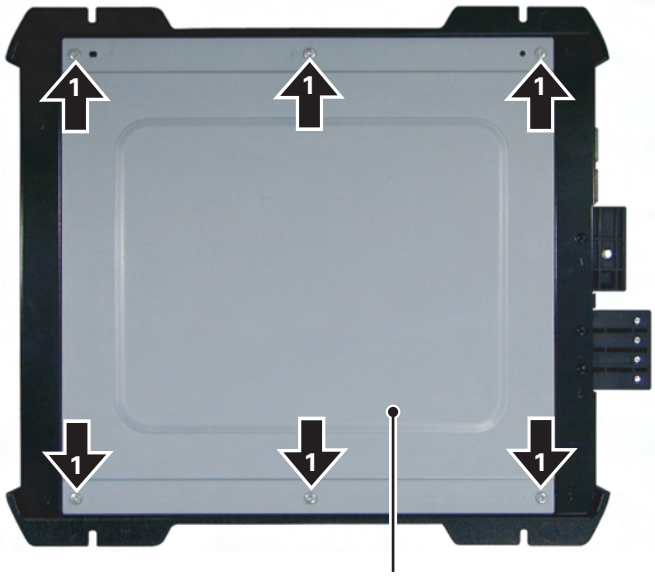


Fig.1

● **Removing the Amp Unit (Fig.2)**

1 Remove the fourteen screws and then remove the Amp Unit.

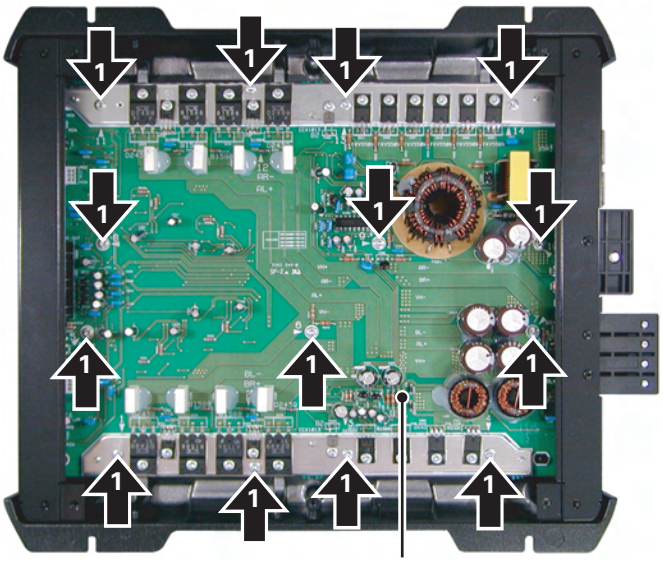
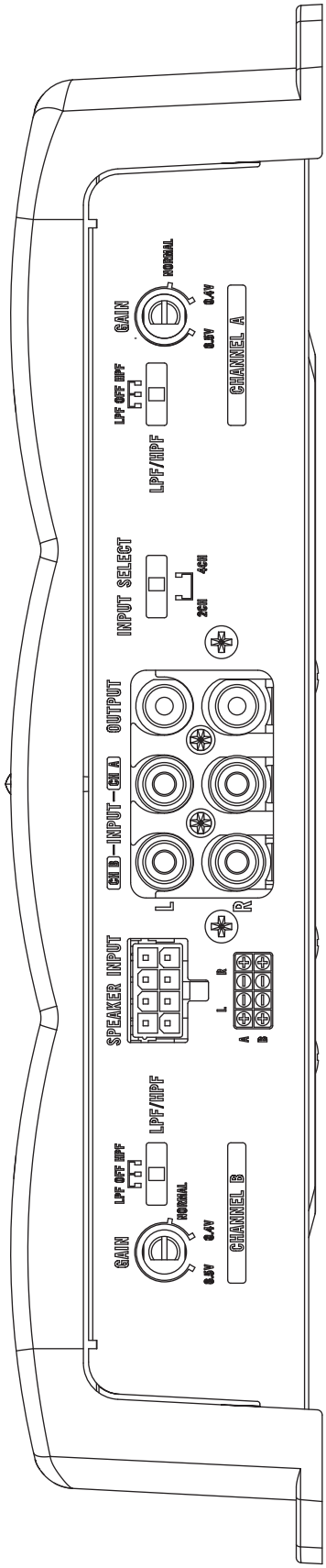
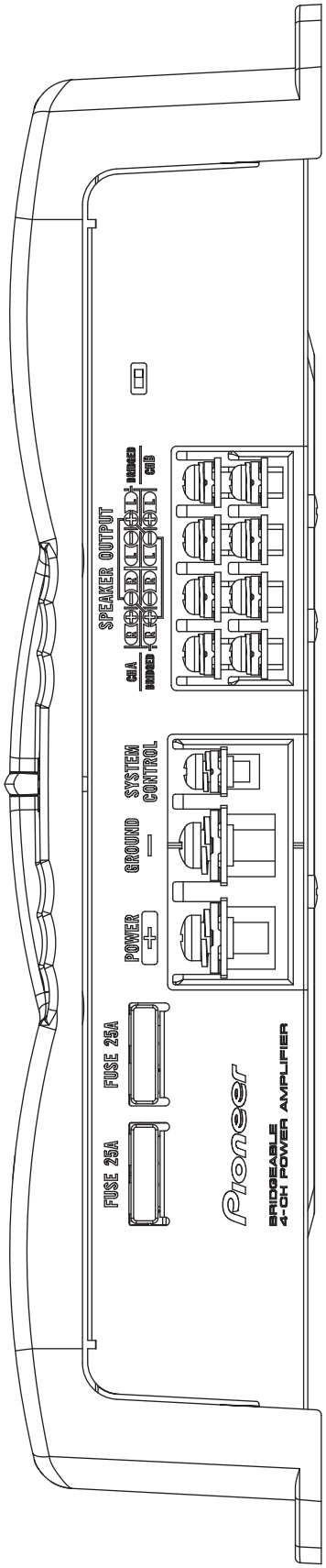


Fig.2

7.1.2 CONNECTOR FUNCTION DESCRIPTION





8. OPERATIONS

Gain Control

Adjusting the gain controls A and B will help match the output of the car stereo to the Pioneer amplifier. Normally, set the gain controls to the NORMAL position. If the output is low, even when the volume of the car stereo is turned up, turn these controls clockwise. If there is distortion when the volume of the car stereo is turned up, turn these controls counter-clockwise.

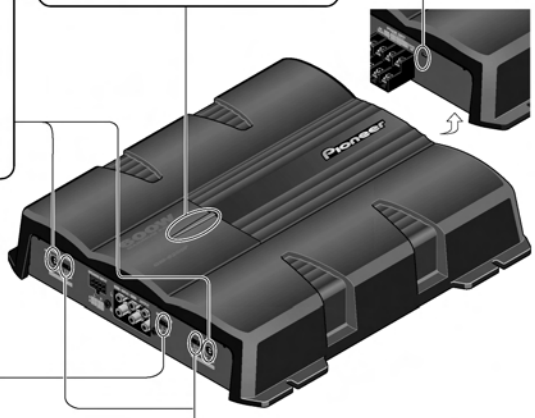
- If you only use one input plug, set the gain controls for speaker outputs A and B to the same position.
- When using with an RCA equipped car stereo (standard output of 500 mV), set to the NORMAL position. When using with an RCA equipped Pioneer car stereo with max. output of 4 V or more, adjust level to match the car stereo output level.

BFC (Beat Frequency Control) Switch

If you hear a beat while listening to an AM broadcast with your car stereo, change the BFC switch using a small standard tip screwdriver.

Power Indicator

The power indicator lights when the power is switched on.



Input Select Switch

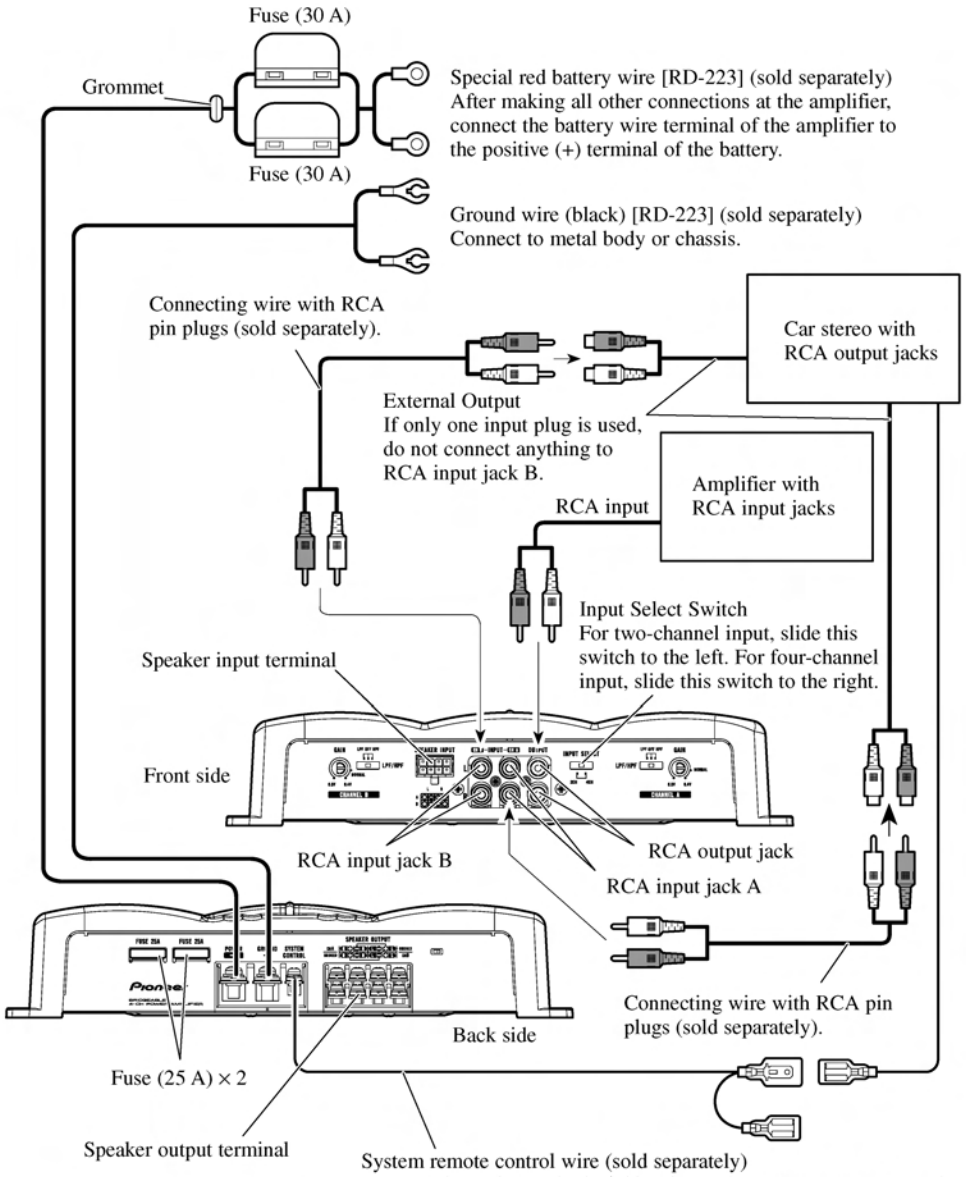
For two-channel input, slide this switch to the left. For four-channel input, slide this switch to the right.

LPF (Low-Pass Filter)/HPF (High-Pass Filter) Select Switch

Set the LPF/HPF select switch as follows according to the type of speaker that is connected to the speaker output connector and the car stereo system:

LPF/HPF Select Switch	Audio frequency range to be output	Speaker Type	Remarks
LPF (Left)	— 80 Hz	Subwoofer	Connect a subwoofer.
OFF (Center)	Full range	Full range	
HPF (Right)	80 Hz —	Full range	Use if you want to cut the very low frequency range because it is not necessary for the speakers you are using.

● CONNECTION DIAGRAM

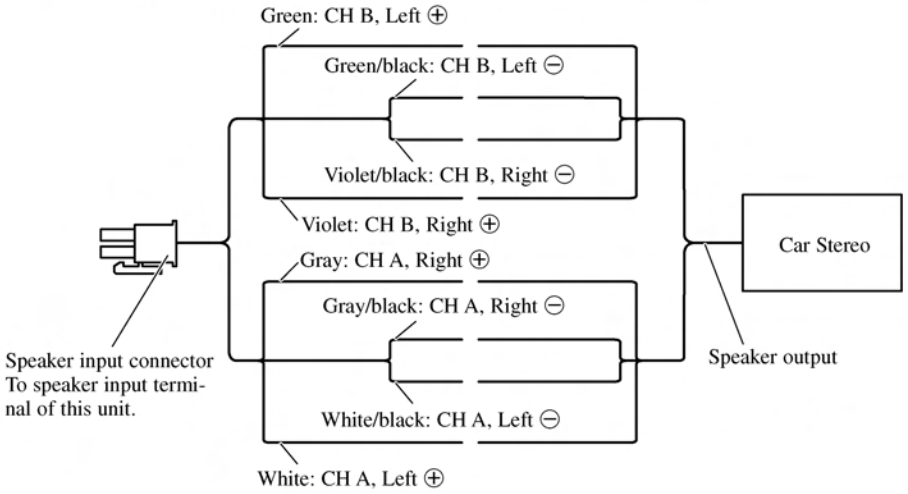

Fuse (30 A)
Grommet
Fuse (30 A)
Special red battery wire [RD-223] (sold separately)
After making all other connections at the amplifier, connect the battery wire terminal of the amplifier to the positive (+) terminal of the battery.
Ground wire (black) [RD-223] (sold separately)
Connect to metal body or chassis.
Connecting wire with RCA pin plugs (sold separately).
Car stereo with RCA output jacks
External Output
If only one input plug is used, do not connect anything to RCA input jack B.
Amplifier with RCA input jacks
RCA input
Input Select Switch
For two-channel input, slide this switch to the left. For four-channel input, slide this switch to the right.
Speaker input terminal
Front side
RCA input jack B
RCA output jack
RCA input jack A
Back side
Connecting wire with RCA pin plugs (sold separately).
Fuse (25 A) × 2
Speaker output terminal
System remote control wire (sold separately)
Connect the male terminal of this wire to the system remote control terminal of the car stereo (SYSTEM REMOTE CONTROL). The female terminal can be connected to the auto-antenna relay control terminal. If the car stereo does not have a system remote control terminal, connect the male terminal to the power terminal through the ignition switch.

Using the Speaker Input

Connect the car stereo speaker output wires to the amplifier using the supplied speaker input connector.

- Do not connect both the RCA input and the speaker input at the same time.

■ Connections when using the speaker input

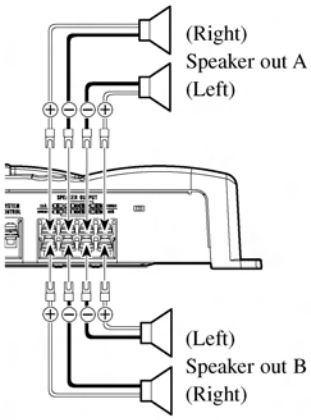

Green: CH B, Left ⊕
Green/black: CH B, Left ⊖
Violet/black: CH B, Right ⊖
Violet: CH B, Right ⊕
Gray: CH A, Right ⊕
Gray/black: CH A, Right ⊖
White/black: CH A, Left ⊖
White: CH A, Left ⊕
Car Stereo
Speaker output
Speaker input connector
To speaker input terminal of this unit.

Connecting the Speakers and Input Wires

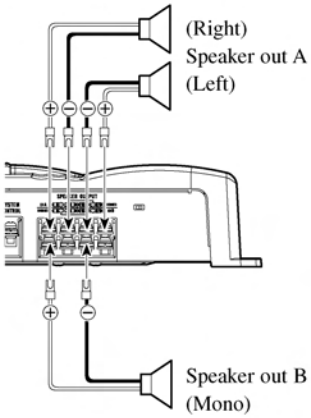
The speaker output mode can be four-channel, three-channel (stereo + mono) or two-channel (stereo, mono). Connect the speaker leads to suit the mode according to the figures shown below.

- In the case of four-channel or three-channel mode, if only one input plug is used, such as when the car stereo has only one output (RCA output), connect the plug to RCA input jack A, but do not connect a plug to RCA input jack B.
- In the case of two-channel mode connect RCA plugs to the RCA input jack A.

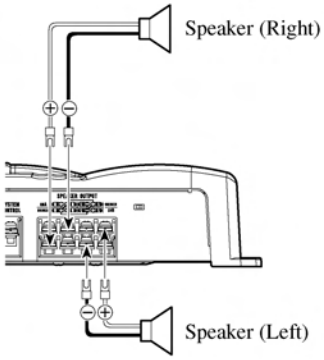
Four-channel mode



Three-channel mode



Two-channel mode (Stereo)



Two-channel mode (Mono)